

ABSTRACT OF THE DISCLOSURE

The development of graft versus host disease in a mammalian patient undergoing cell transplantation therapy for treatment of a bone marrow mediated disease, is prevented or alleviated by subjecting at least the T-cells of the allogeneic cell transplantation composition, extracorporeally, to oxidative stress, in appropriate dosage amounts, such as bubbling a gaseous mixture of ozone and oxygen through a suspension of the T-cells. The process may also include irradiation of the cells with UV light, simultaneously with the application of the oxidative stress. The oxidative stress induces reduced inflammatory cytokine production and a reduced proliferative response in the T-cells.